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Enzymes involved in petroselinic acid biosynthesis

Description of Technology: This invention is in the field of plant molecular biology. More specifically, this invention pertains to nucleic acid fragments encoding genes involved in petroselinic acid biosynthesis in plants and seeds.

Patent Listing:

1. **US Patent No. 7,002,060**, Issued February 21, 2006, "Enzymes involved in petroselinic acid biosynthesis"

http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F7002060

Market Potential: Monounsaturated fatty acids are important components of human nutrition and have been found to have health benefits, such as lowering the risk of heart disease by reducing the "bad" (low-density lipoprotein) cholesterol while maintaining the "good" (high-density lipoprotein) cholesterol (Mattson et al. (1985) Journal of Lipid Research 26:194 202). The most common naturally occurring monounsaturated fatty acid is oleic acid (18:1.DELTA..sup.9), which is found in abundance in "healthy" oils such as olive and canola. Therefore, it is desirable to produce oils that have increased ratios of monounsaturated to polyunsaturated fatty acids such as linoleic or linolenic acids (18:2, and 18:3, respectively), and the unsaturated fatty acids such as palmitic and stearic (16:0, and 18:0, respectively).

Benefits:

- Increases amount of monounsaturated fats

Applications:

- Cooking and vegetable oils
- Food products

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